

DATE: June 16, 2004 FILE REF: 4533

TO: Members of the Natural Resources Board

FROM: Scott Hassett

SUBJECT: Recommendation for Adoption of Modifications to Mercury Air Emission Rule (AM-27-01, LRC 01-081)

BACKGROUND

The Natural Resources Board adopted the mercury air emission rule (AM-27-01) on June 25, 2003. The Senate Committee on Environment and Natural Resources and the Assembly Natural Resources Committee conducted a joint public hearing on the rule (LRC 01-081) on August 13, 2003. After this public hearing, each Committee approved a motion requesting the Department to consider modifications to the rule. Each motion stated that the Committee would object to the rules on the grounds that they are arbitrary and capricious, and impose an undue hardship under the provisions of s. 227.19(4)(d) 6, Stats., if the Department did not agree to consider modifications. On August 22, 2003, the Department sent a letter to each Committee agreeing to consider modifications to the mercury rule.

In a letter dated May 28, 2004, the Committee Chairs requested four specific modifications (Attachment 1). The Department has had additional discussions with interested parties and the offices of the standing legislative committee chairs concerning the requested modifications. As a result of these discussions staff are recommending six rule modifications and four technical rule changes in response to the request for modifications requested by the Committee Chairs.

RECOMMENDATION

I recommend that the Board adopt the staff proposed modifications and technical corrections to the mercury air emission rule.

ANALYSIS AND PROPOSED MODIFICATIONS

Staff have evaluated each of the four specific modifications requested by the Committee Chairs. Below are their analysis and recommendations for modifications to address each of the four modifications requested. Rule language for the staff recommended modifications and technical corrections to the mercury air emission rule (AM-27-01) are included in Attachment 2.

1. RELATION TO FEDERAL MERCURY RULES

Legislative Request - *Replace the reporting requirement in s. NR 446.12(2), that directs the DNR staff to report to the Natural Resources Board on federal regulations or laws that provide for mercury emission reductions from sources affected by the rule, with a provision that establishes that stationary sources subject to an emission limitation for mercury established by federal regulation or law are exempt from the requirements of the rule. This change will also require modifications in other affected provisions in*

the rule, such as the exemption for new or modified stationary sources regulated under federal emission limits in NR 446.05(2).

Recommended Modifications

- Add a new section to the rule to recognize the statutory requirements regarding the impact of a subsequently adopted federal emission standard for mercury from major utilities under either section 111 or 112 of the federal Clean Air Act. Include language that specifies that the Department will revise the state mercury rule within 18 months of the promulgation of a federal mercury emission standard.
- Include a new subsection in the emission reduction requirements of the rule acknowledging the Department's responsibility to meet the requirements of the s. 285.27, Wis. Stats., as affected by 2003 Wisconsin Act 118, to reconcile the rule with any federal standard regulating mercury emissions from electric utilities, including the requirement that the emissions limitations not be more restrictive than the federal standard.
- Include language that provides an option for a major utility to exempt units less than 25 MW from mercury reduction requirements. This option would apply to Dairyland Power Alma Units 1, 2, & 3 and WE Energies County Units 1, 2, & 3.

Analysis

The recommended modifications address the concern that major utilities in the state would be placed in a situation of simultaneously addressing emission reductions requirements for mercury in a state rule and a federal regulation. The proposed modifications clearly indicate the Departments' intent to move promptly to revise the mercury air emission rule to include the federal emission standards and administrative requirements when a federal requirement becomes effective. The recommended modifications require that the Department have a rule revision in place within 18 months. These proposed modifications do not preclude the Departments' ability to seek retention of the provisions in the state rule that provide compliance flexibility such as system-wide averaging and the electric reliability waiver, when rule revisions to meet a federal requirement are proposed. In addition, we are recommending a modification that would provide an option for a major utility to exempt units that are less than 25 MW. This is the exemption level that is being considered in federal mercury proposals.

2. 80% EMISSIONS REDUCTION

Legislative Request - Remove the 80% mercury emission reduction requirement in s. NR 446.06(3) and revise the evaluation reports in s. NR 446.12(1), accordingly. We feel that the removal of this requirement does not preclude a subsequent determination by the DNR that commercial mercury control equipment is available for affected power plants in Wisconsin to reach an 80% reduction standard and that such a standard is warranted in light of any federal actions on mercury controls.

Recommended Modifications

- Change the mercury emission reduction requirement, which becomes applicable on January 1, 2015, from 80% to 75%.

- Include language in the mercury rule setting a goal of reducing mercury emissions from major utilities by 80% by 2018 as measured from baseline mercury emission levels.

Analysis

In order to provide additional flexibility in achieving emission reductions in response to testimony by the utilities at the legislative hearings and to approximate the emission reductions being considered in various federal mercury reduction proposals we are recommending that the 80% reduction requirement for 2015 be changed to 75%. In addition, to address concerns that an 80% emission limit is not attainable, and to reflect the Department's interest in achieving maximum reductions of mercury emissions consistent with technological developments, we recommend adding a mercury emission reduction goal of 80% to be attained by 2018.

The recommended modifications true up the mercury air emission rule with federal proposals and still provide incentive for additional reductions that staff believes are technically achievable. Periodic evaluation of rule requirements will still be conducted to ensure that technology is available to achieve the required reductions.

3. BANKING AND TRADING OF EMISSION REDUCTIONS

Legislative Request - *Expand the trading of major utility emission reduction credits in s. NR 446.08 (2) to also apply to compliance with the cap in s. NR 446.06 (1) (a) and to allow major utilities to bank excess emission reduction credits.*

Recommended Modifications

- Include a new section in the rule allowing for the generation of early emission reduction credits, which may be utilized by major utilities to achieve compliance with the emission limitations prior to 2018.

Analysis

We are recommending a modification that will promote early actions to reduce mercury emissions by major utilities. A major utility would be able to create emission reduction credits for actions taken after rule promulgation to reduce their mercury emissions. These emission reduction credits can be used by the major utility to meet the 40% and 75% emission reduction requirements. These credits can not be traded to another major utility to meet their reduction requirements and all unused credits would expire at the end of 2017.

In addition to the recommended modification the following compliance options will remain in the mercury emission reduction rule:

- compliance is demonstrated on a system-wide basis
- a multi-pollutant option is available as an alternative for the 2010 emission limit
- trading between other state utilities is an option for meeting the annual emission limits
- a one-year true-up period is allowed if a utility fails to achieve the reduction requirement in any year

4. SMALL SOURCE EMISSION REDUCTION PROGRAM

Legislative Request - *Include in the rule a volunteer opportunity for all types of sources to provide emission reduction credits such as in the version of the rule that went to hearing.*

Recommended Modifications

None recommended.

Analysis

The emission reduction credit program included in the version of the rule that went to public hearing was removed after consideration of public comments and additional Department analysis. This program would have allowed emission reduction credits to be created from a *pollution reduction project* performed at sources other than major utilities and through a *mercury-containing products reduction project*.

In our additional analysis we considered criteria that the United States Environmental Protection Agency (EPA) employs to evaluate trading programs. That criteria includes measures for trading program equity and integrity:

- Integrity – Are the reduction credits surplus, quantifiable, enforceable and permanent?
- Equity – A measure of whether the emission reductions offered for trade have the same environmental benefit as reductions required from the source.

Considering these criteria we found that emission reductions obtained from a *mercury-containing products reduction project* cannot be determined with any degree of certainty and therefore are not quantifiable and do not meet the integrity test. In addition, stack emission reductions and potential reductions from a mercury product collection program do not have the same environmental benefit, therefore there may not be equity between these reductions. As a result, the products reduction projects provisions were removed from the proposal.

An additional equity issue relates to the difference in the precision and accuracy of measurements for a combustion source, like a coal-fired boiler, compared to measuring mercury emissions from a process source, like a chlor-alkali production plant. In the case of the coal-fired boiler mercury emissions can be determined through direct measurement in the stack. Mercury emissions from a chlor-alkali are indirectly determined by a material balance method that is less precise and accurate than a stack emission determination. Therefore in most cases we could not determine if mercury emission reductions from process sources are equivalent to reductions in mercury emissions from a combustion source. This lack of integrity and equity in the open market trading program initially proposed in the rules caused us to strike these provisions. We have also discovered that the amount of emission credits we expected to be created from industrial combustion sources was much less than anticipated.

ADDITIONAL TECHNICAL RULE CHANGES

In our review of the mercury air emission rule in response to the modifications requested by the Committee Chairs, we discovered four technical corrections that should also be considered. The

following are the areas that we are recommending technical corrections and the reasons for those changes:

- Modify the period for the sampling of fuel mercury content required for determining the baseline from the calendar year of 2004 to the 12 months following rule promulgation.

Due to the period of time to accommodate legislative review the starting date for major utilities to collect data necessary to establish a baseline for emission reductions has passed. We are recommending a technical change that moves the starting date for data collection to commence after rule promulgation.

- Include a note following the rule provisions relating to multi-pollutant reduction alternatives to reference Environmental Cooperative Agreements (such as that signed by the Department and WEPCO on September 30, 2002) as a potential basis for a multi-pollutant reduction alternative.

This note is intended to acknowledge the commitment that WEPCO has already made to achieve emission reductions beyond regulatory requirements through a multi-pollutant approach. It also is intended to indicate that the Environmental Cooperative Agreement may be submitted for department consideration as meeting some of the requirements under the multi-pollutant reduction alternative. This alternative allows relief from the 40% mercury reduction requirement if certain conditions are met.

- Add section 111 to the federal regulations that would be included in a reconciliation report.

The recent federal proposals to limit mercury emissions from utilities included regulations under two sections of the Clean Air Act, section 111 and section 112. We are suggesting a technical change to ensure that federal rules promulgated under this section are also included in the Department's reconciliation reports.

- Modify the periodic evaluation and reconciliation report provisions of the rule to include the legislative standing committees as recipients of the reports, providing the committees with an opportunity to monitor the rule's implementation and the appropriateness of the Department's response to mercury control technology developments.

This is being done in recognition of the legislative interest in this matter. This will provide the standing committees with an opportunity to monitor the progress in the development of mercury reduction technologies and the appropriateness of the Department's response.